State of Wisconsin/Department of Transportation

RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: Mar 31, 2002

Program: SPR-0010(36) FFY99	**Part: II Research and Development**
Project Title: Geosynthetics in Stabilizing Soft Subgrade w/ Breaker Run	**Project ID:** 0092-45-15
Administrative Contact: Nina McLawhorn	**Sponsor:**
WisDOT Technical Contact: Error! Bookmark not defined.	**Approved Starting Date:** Aug 31, 1999
Approved by COR/Steering Committee: $55,000.00	**Approved Ending Date:** May 31, 2002
Project Investigator (agency & contact): Tuncer Edil: UW-Madison	

Description: Error! Bookmark not defined.

Total study budget	Current FFY budget	Expenditures for current quarter	Total Expenditures to date
$55,000.00	**$13,750.00**	**$0.00**	**$0.00**

Progress This Quarter:

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)

The test sections in which geosynthetics-reinforced sections (geoweb, geotextile, geogrid, and geocomposite) were used are being monitored continuously at State Highway 60. Monitoring included collection of environmental data (meteorogical and subsurface data including thermal and mositure data), geosynthetics strain, and deflection surveys. Processing data is still in progress.

The large-scale test pit experiments using the geosynthetics, i.e., geogrid, woven and nonwoven geotextile, and geocomposite, were planned. For geogrid, strain gages were purchased from manufacturer and mounted to the dogbone shape of geogrid test specimen in the lab.. The subbase thickness with geosynthetics and the location and position of geosynthetics in the test section were determined. 12 inches thick grade 2 was tested by itself so that it could serve as a reference test to the geosynthetics tests.

The interim report for STH60 project was submitted to WisDOT in March 2002. The field test results with a paper relevant to geosynthetic stabilizing soft subgrades at STH60 was presented at Transportation Research Board 81th Annual Meeting held in Washington, D.C. from January 13 – 17, 2002.

Work Next Quarter:

The test pit experiments using the geosynthetics, i.e., geogrid, woven and nonwoven geotextile, and geocomposite will be performed. For these purposes, two different subbase layer thickness (12 and 18 inches) for each geosynthetic will be simulated. The burying location of geosynthetics in subbase layer will be on the top of the subgrade. Based on the literature review it is found that most of these materials are being used with around 12 inch fill materials. As was the case with geocells, the new geosynthetics will also be filled with grade 2 material.

Before each test is performed some time will be spent on mounting the instruments on the test specimens, which will make these tests take longer. As an extra instrumentation strain gages will be attached, which requires couple weeks of work prior to testing. Once the tests are completed the data obtained from each test will be analyzed and sorted before starting a new test.

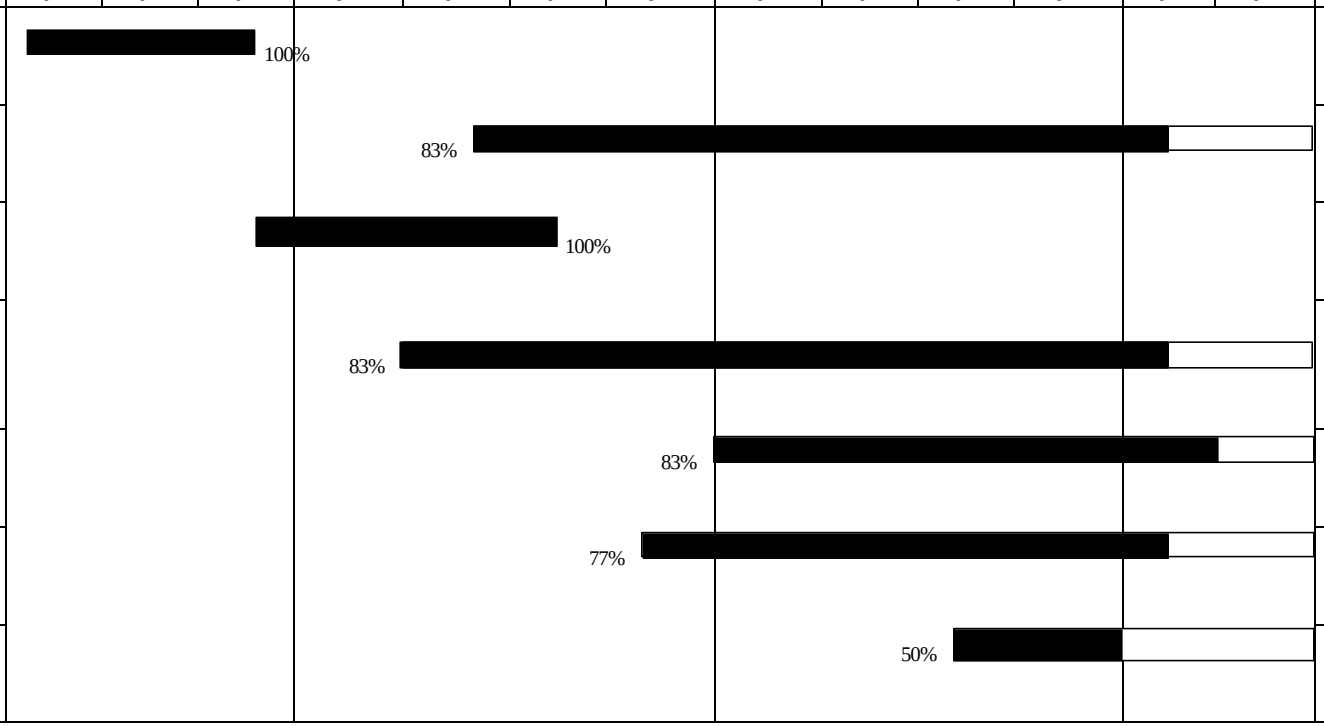
The FWD and field monitoring data collected from STH60 site will be processed and analyzed continuously. The results will be compared with the corresponding the large-scale laboratory-measured resilient moduli data. Also, the comparisons will be made between the predicted and measured deflections and the laboratory and field-measured moduli.

Circumstances affecting progress/budget:

None to date

Gantt Chart:

ID		1999			2000				2001				2002		Remarks
		Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	
1	Literature Study														
2	Laboratory Investigation														
3	Test Section Design														
4	Test Section Construction, Testing, and Instrumentation														
5	Test Section Monitoring														
6	Data Analysis														
7	Design Implications														



Note: Gantt chart shown in State Fiscal Year Quarters